

Title (en)
LINE-OF-SIGHT DETECTION DEVICE

Title (de)
VORRICHTUNG ZUR SICHTLINIENERKENNUNG

Title (fr)
DISPOSITIF DE DÉTECTION DE LIGNE DE VISÉE

Publication
EP 3499462 A4 20200108 (EN)

Application
EP 17839579 A 20170810

Priority
• JP 2016158944 A 20160812
• JP 2017029092 W 20170810

Abstract (en)
[origin: EP3499462A1] A line-of-sight detection device 1 includes a camera 10, a light source 13 that causes corneal reflection, and an image processing device 20 that obtains information on a pupil shape of an eye, a position (P) of a pupil center, and a position (G) of the cornea reflection and obtains a line of sight of a subject M. The image processing device 20 includes a first optical axis acquisition unit 28 that acquires a first optical axis candidate using the position (P) of the pupil center and the position (G) of the cornea reflection, a second optical axis acquisition unit 29 that obtains a second optical axis candidate using the pupil shape, an optical axis information acquisition unit 31 that generates information for acquiring the optical axis, a calibration information unit 33 that provides calibration information, and a visual axis acquisition unit 32 that obtains a visual axis AS as a line of sight by calibrating an optical axis AL using the calibration information.

IPC 8 full level
G06T 7/70 (2017.01); **A61B 3/113** (2006.01); **G06F 3/0346** (2013.01); **G06T 7/73** (2017.01)

CPC (source: EP US)
A61B 3/113 (2013.01 - EP US); **G06F 3/0346** (2013.01 - EP US); **G06T 7/593** (2016.12 - US); **G06T 7/70** (2016.12 - EP US); **G06T 7/73** (2016.12 - EP); **G06T 7/74** (2016.12 - US); **G06T 7/80** (2016.12 - US); **G06T 2207/30201** (2013.01 - EP US)

Citation (search report)
• [A] US 2007279590 A1 20071206 - EBISAWA YOSHINOBU [JP]
• [A] US 8824779 B1 20140902 - SMYTH CHRISTOPHER CHARLES [US]
• [A] VILLANUEVA A ET AL: "Evaluation of Corneal Refraction in a Model of a Gaze Tracking System", IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, IEEE SERVICE CENTER, PISCATAWAY, NJ, USA, vol. 55, no. 12, 1 December 2008 (2008-12-01), pages 2812 - 2822, XP011342791, ISSN: 0018-9294, DOI: 10.1109/TBME.2008.2002152
• See references of WO 2018030515A1

Designated contracting state (EPC)
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DOCDB simple family (publication)
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DOCDB simple family (application)
EP 17839579 A 20170810; JP 2017029092 W 20170810; JP 2018533562 A 20170810; US 201716324583 A 20170810